SEQUENCE LISTING

<110> Van Den Hazel, Bart
Jensen, Anne D.
Nygaard, Frank B.
Andersen, Kim V.

<120> Full-length Interferon Gamma Polypeptide Variants

<130> 16384US04

<150> PCT/DK03/000426
<151> 2003-06-23

<160> 13

<170> PatentIn version 3.3

<210> 1
<211> 143
<212> PRT
<213> Homo Sapiens

<220>
<221> MISC_FEATURE
<223> Wild-type mature human IFN Gamma (without the signal peptide)

<400> 1

Gln Asp Pro Tyr Val Lys Glu Ala Glu Asn Leu Lys Lys Tyr Phe Asn
1 5 10 15

Ala Gly His Ser Asp Val Ala Asp Asn Gly Thr Leu Phe Leu Gly Ile
20 25 30

Leu Lys Asn Trp Lys Glu Glu Ser Asp Arg Lys Ile Met Gln Ser Gln
35 40 45

Ile Val Ser Phe Tyr Phe Lys Leu Phe Lys Asn Phe Lys Asp Asp Gln
50 55 60

Ser Ile Gln Lys Ser Val Glu Thr Ile Lys Glu Asp Met Asn Val Lys
65 70 75 80

Phe Phe Asn Ser Asn Lys Lys Lys Arg Asp Asp Phe Glu Lys Leu Thr
85 90 95

Asn Tyr Ser Val Thr Asp Leu Asn Val Gln Arg Lys Ala Ile His Glu
100 105 110

Leu Ile Gln Val Met Ala Glu Leu Ser Pro Ala Ala Lys Thr Gly Lys
115 120 125

Arg Lys Arg Ser Gln Met Leu Phe Arg Gly Arg Arg Ala Ser Gln
130 135 140

<210> 2
<211> 166
<212> PRT
<213> Homo Sapiens

<220>
<221> MISC_FEATURE
<223> Wild-type human IFN gamma with its 23 residue leader sequence

<400> 2

Met Lys Tyr Thr Ser Tyr Ile Leu Ala Phe Gln Leu Cys Ile Val Leu
1 5 10 15

Gly Ser Leu Gly Cys Tyr Cys Gln Asp Pro Tyr Val Lys Glu Ala Glu
20 25 30

Asn Leu Lys Lys Tyr Phe Asn Ala Gly His Ser Asp Val Ala Asp Asn
35 40 45

Gly Thr Leu Phe Leu Gly Ile Leu Lys Asn Trp Lys Glu Glu Ser Asp
50 55 60

Arg Lys Ile Met Gln Ser Gln Ile Val Ser Phe Tyr Phe Lys Leu Phe
65 70 75 80

Lys Asn Phe Lys Asp Asp Gln Ser Ile Gln Lys Ser Val Glu Thr Ile
85 90 95

Lys Glu Asp Met Asn Val Lys Phe Phe Asn Ser Asn Lys Lys Lys Arg
100 105 110

Asp Asp Phe Glu Lys Leu Thr Asn Tyr Ser Val Thr Asp Leu Asn Val
115 120 125

Gln Arg Lys Ala Ile His Glu Leu Ile Gln Val Met Ala Glu Leu Ser
130 135 140

Pro Ala Ala Lys Thr Gly Lys Arg Lys Arg Ser Gln Met Leu Phe Arg

145 150 155 160

Gly Arg Arg Ala Ser Gln
165

<210> 3
<211> 140
<212> PRT
<213> Artificial Sequence

<220>
<223> ACTIMMUNE® - a 140 residue form of human IFN gamma obtained by fermentation from genetically engineered E. Coli

<400> 3

Met Gln Asp Pro Tyr Val Lys Glu Ala Glu Asn Leu Lys Lys Tyr Phe
1 5 10 15

Asn Ala Gly His Ser Asp Val Ala Asp Asn Gly Thr Leu Phe Leu Gly
20 25 30

Ile Leu Lys Asn Trp Lys Glu Glu Ser Asp Arg Lys Ile Met Gln Ser
35 40 45

Gln Ile Val Ser Phe Tyr Phe Lys Leu Phe Lys Asn Phe Lys Asp Asp
50 55 60

Gln Ser Ile Gln Lys Ser Val Glu Thr Ile Lys Glu Asp Met Asn Val
65 70 75 80

Lys Phe Phe Asn Ser Asn Lys Lys Lys Arg Asp Asp Phe Glu Lys Leu
85 90 95

Thr Asn Tyr Ser Val Thr Asp Leu Asn Val Gln Arg Lys Ala Ile His
100 105 110

Glu Leu Ile Gln Val Met Ala Glu Leu Ser Pro Ala Ala Lys Thr Gly
115 120 125

Lys Arg Lys Arg Ser Gln Met Leu Phe Arg Gly Arg
130 135 140

<210> 4
<211> 498
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Expression cassette optimised for expression of interferon gamma in CHO cells

<400> 4
atgaagtaca caagctatat cctggccttt cagctgtgca tcgtgctggg ctccctgggc 60

tgctattgcc aggaccctta cgtgaaggag gccgagaacc tgaagaagta ctttaacgcc 120

ggccacagcg atgtggccga caatggcaca ctgtttctgg gcatcctgaa gaattggaag 180

gaggagagcg atcggaagat catgcagtcc cagatcgtgt ccttctattt caagctgttt 240

aagaatttca aggacgatca gtccatccag aagtccgtgg agaccatcaa ggaggacatg 300

aacgtgaagt ttttcaatag caataagaag aagagagacg atttcgagaa gctgaccaat 360

tactccgtga cagacctgaa cgtgcagaga aaggccatcc acgagctgat ccaggtgatg 420

gccgagctgt cccccgccgc caagaccggc aagagaaaga gaagccagat gctgttcaga 480

ggcagacggg ccagccag 498

<210> 5
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Antisense downstream vector Primer ADJ 013

<400> 5
gatggctggc aactagaag 19

<210> 6
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: sense upstream vector Primer ADJ014

<400> 6
tgtacggtgg gaggtctat 19

<210> 7
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer ADJ093

<400> 7
gttcaggtct gtcacgctgt aattggtcag ctt 33

<210> 8
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer ADJ094

<400> 8
aagctgacca attacaccgt gacagacctg aac 33

<210> 9
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer ADJ091

<400> 9
catgatcttc cgatcggtct cgttcttcca att 33

<210> 10
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer ADJ092

<400> 10
aattggaaga acgagaccga tcggaagatc atg 33

<210> 11
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 11
ccgtcagatc ctaggctagc ttattgcggt agtttatcac 40

<210> 12
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 12
gagctcggta ccaagctttt aagagctgta at 32

<210> 13
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: upstream sequence for optimizing mRNA translation

<400> 13
gccgccacc 9